

- **DARPA's Shredder Challenge Solved**

December 02, 2011

Challenge reinforces difficulty of reconstructing documents

Almost 9,000 teams registered to participate in DARPA's Shredder Challenge. Thirty-three days after the challenge was announced, one small San Francisco-based team correctly reconstructed each of the five challenge documents and solved their associated puzzles. The 'All Your Shreds Are Belong to U.S.' team, which won the \$50,000 prize, used custom-coded, computer-vision algorithms to suggest fragment pairings to human assemblers for verification. In total, the winning team spent nearly 600 man-hours developing algorithms and piecing together documents that were shredded into more than 10,000 pieces.

"Lots of experts were skeptical that a solution could be produced at all let alone within the short time frame," said [Dan Kaufman](#), director, [DARPA Information Innovation Office](#). "The most effective approaches were not purely computational or crowd-sourced, but used a combination blended with some clever detective work. We are impressed by the ingenuity this type of competition elicits."

The Shredder Challenge represents a preliminary investigation into the area of information security to identify and assess potential capabilities that could be used by war fighters operating in war zones to more quickly obtain valuable information from confiscated, shredded documents and gain a quantitative understanding of potential vulnerabilities inherent to the shredding of sensitive U.S. National security documents.

DARPA Director, [Regina E. Dugan](#) emphasized, "The DARPA Shredder Challenge underscores the value of increasing the number and diversity of problem solvers. The varied methods used have potential implications for so-called 'wicked problems,' generally considered insolvable by conventional means, and offer the possibility of increased speed, agility and breadth in innovation."

Puzzle solutions and pictures of the winning submissions are available on the Challenge website: [www.shredderchallenge.com](http://www.shredderchallenge.com).